

[Document] SPECIFICATION
[Title of Invention] VEHICLE PEDAL DEVICE CAPABLE OF
ADJUSTING PEDAL POSITION IN
LONGITUDINAL DIRECTION OF
VEHICLE

[Claims]

[Claim 1] A pedal device for a vehicle, comprising:

a depressable portion which is to be operationally depressed by a driver of the vehicle;

an output member which is pivotably supported by a supporting shaft provided in a bracket that is fixed to a body of the vehicle, such that said output member is pivoted about said supporting shaft when said depressable portion is operationally depressed, for thereby applying to a motive-power transmitting member an output corresponding to a depression force which is applied to said depressable portion; and

a longitudinal adjustment device for moving said depressable portion in a longitudinal direction of the body of the vehicle when said depressable portion is not being operationally depressed;

said pedal device being characterized by comprising:

a pedal-ratio varying mechanism which is disposed between said output member and said motive-power transmitting member, and which is capable of adjusting a pedal ratio of said pedal device.

[Claim 2] A pedal device according to claim 1, characterized in that said pedal-ratio varying mechanism includes:

a pivot lever which is supported by an attaching shaft parallel to said supporting shaft and provided in said bracket

such that said pivot lever is pivotable about said attaching shaft, said pivot lever being connected to said motive-power transmitting member such that said pivot lever is pivotable relative to said motive-power transmitting member about a first connecting shaft parallel to said attaching shaft; and

a connecting link which is connected to said pivot lever such that said connecting link is pivotable relative to said pivot lever about a second connecting shaft parallel to said attaching shaft, said connecting link being connected to said output member such that said connecting link is pivotable relative to said output member about a third connecting shaft parallel to said second connecting shaft,

wherein said depression force applied to said depressable portion is transmitted from said output member to said motive-power transmitting member via said connecting link and said pivot lever.

[Claim 3] A pedal device according to claim 1 or 2, characterized in that said longitudinal adjustment device includes:

an adjusting link which is supported by said supporting shaft such that said adjusting link is pivotable about said supporting shaft and is positioned in a predetermined pivoted position by adjusting means;

a pedal member which is connected to said adjusting link such that said pedal member is pivotable relative to said adjusting link about a fourth connecting shaft parallel to said supporting shaft, said pedal member being provided with said

depressable portion, so that said pedal member is pivoted about said fourth connecting shaft when said depressable portion is operationally depressed; and

an interlock link which is connected to said pedal member such that said interlock link is pivotable relative to said pedal member about a fifth connecting shaft parallel to said supporting shaft, said interlock link being connected to said output member such that said interlock link is pivotable relative to said output member about a sixth connecting shaft parallel to said supporting shaft, said interlock link cooperating with said adjusting link to position said pedal member in a fixed posture, said interlock link being pivoted about said sixth connecting shaft when said adjusting link is pivoted, for thereby causing a circular motion of said pedal member in a longitudinal direction of the vehicle, said interlock link causing said output member to be pivoted about said supporting shaft when said pedal member is pivoted about said fourth connecting shaft with said depressable portion being operationally depressed and with said adjusting link being positioned in a predetermined pivoted position;

wherein a line connecting said supporting shaft and said fourth connecting shaft, a line connecting said fourth connecting shaft and said fifth connecting shaft, a line connecting said fifth connecting shaft and said sixth connecting shaft and a line connecting said sixth shaft and said supporting shaft cooperate with each other to substantially define a parallelogram, so that said pedal member is substantially parallelly displaced when said